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GLEANINGS

IN BEE CULTURE

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GLEANINGS

A JOURNAL DEVOTED
TO BEES
AND HONEY
AND HOME
INTERESTS.

BEE CULTURE

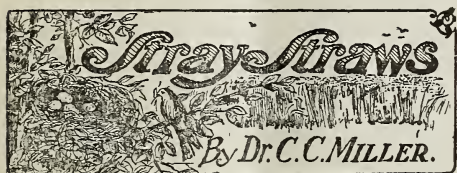
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No. 17



THAT SPURT that I reported Aug. 7 didn't amount to much. Clover is still plentiful, Aug. 21, and bees do a little in the forenoon, but nothing to amount to much has been stored since July 20. But it's something to be thankful for that bees are making their living, and they're doing at least a little more than that.

"VIRGIN" is a word that may be used alone more than it is. Gradually we have come to use it altogether in our work in the apiary for any but a laying queen. "No. 5 has a virgin," means No. 5 has a young queen not yet known to be laying. "No. 6 has a queen" means it has a laying queen. Economy of language, you see.

GRIGGS BROS., page 859, speaking of sections only half filled, say that "this kind of honey is worth too much to the bee-keeper to keep as bait sections for another season." They probably do not mean just what they say, for that kind of honey should not be kept, but the comb in the section after the honey has been emptied out by the bees. This by way of caution to the beginner.

L. BURR writes that the right kind of a putty-knife is sufficiently strong to lift heavy supers—the blade four inches wide at the edge, and fastened in the handle with two screws. He thinks no better hive-tool need be sought. [One of our apiarists prefers a broad-bladed putty-knife to any thing else. With it he does every thing that one can ordinarily do with any tool; and it always has the merit of being the best propolis and wax scraper that can possibly be devised.—ED.]

W. G. HUTCHINSON, page 858, says the survival of Italian blood shows them fittest for the tropics. Here it is black blood that

is most persistent. Very, very hard to keep up any thing like pure Italian blood. [I believe it is a fact that a locality pretty well Italianized will, if left to itself, without the infusion of fresh yellow blood, in time revert to the black blood. Apparently the conditions in this country are such as to favor the increase toward the black brood rather than toward the yellow.—ED.]

SOME REMARKS. page 857, about cubical-shaped hives lead me to say that it should not be forgotten that the depth of the Langstroth hive is as great as either of its other dimensions during that very important portion of the year when bees are laying up surplus. However you may limit the depth to that of the brood-chamber, the bees don't recognize any such limitation. They count the sections or the extracting-chamber just as much a part of their home as the brood-chamber. [Your observation is quite correct. A good many who use cubical-shaped hives forget the fact that the Langstroth hive may be any depth from a story and a half to three stories or more.—ED.]

IF A SECTION of honey is taken off just as soon as it is sealed, the honey will not be as rich as if the section is left on two or three weeks longer. But that two or three weeks' improvement, instead of raising the market value of the product, will lower it. The consuming public knows that the earlier-harvested article looks nicer, but it doesn't know that the darker, better-ripened article tastes nicer. If it knew the whole truth, would it not prefer the really better article? Ought or ought not some pains to be taken to educate the consuming public as to the real truth? [What you say is all true; but I am afraid it will take a long time before we can educate the dear public to believe that dark dirty-looking honey may be a whole lot better than the fancy white goods selling at a much higher price.—ED.]

RESPONDING, Mr. Editor, to your request for report from any one who has successfully wintered duplicate queens, I may say that I wintered many a queen much as Wm. Reiber says, page 871, only I used, instead of screen divisions, thin board partitions.

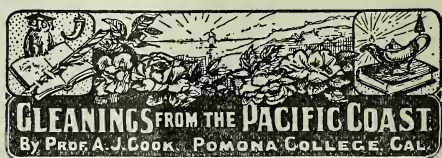
Usually I had only two nuclei in the same hive; and in the winter, by looking in at the entrance the two clusters of bees could be seen formed into one cluster, just as if there were no $\frac{1}{8}$ board between them. [The A. I. Root Co. is somewhat interested in this proposition, for it would like to winter over a large surplus of queens in order to have them on hand ready for the early queen orders. If the plan under consideration is generally feasible for a good dry cellar, then all we would have to do would be to remove one queen, draw the division or slide, and allow the queen in the other to become the mother of the portion dequeened. Perhaps this remaining queen would have to be "introduced," to prevent the motherless bees or those lately made motherless from attacking the new mother. —Ed.]

A CORRESPONDENT asks me to answer here the following: "I have for honey-flow here, no basswood, just white and red clovers, a little sweet clover along roadsides, and smartweed. Have you any reason to think that 100 colonies of bees could be supported with good returns in such a locality?" Yes, if the white clover is abundant. You have pretty nearly described my own location, except that smartweed (heartsease?) does not count much. But I'd give a pretty penny if some one would tell us whether, year by year, 80 colonies would not give me more surplus than 100. [This is a question as much as any other one in bee culture that hinges largely on locality. In Mr. Alexander's locality, and his management and his bees, I think 1000 colonies would not be too many for one yard. In another, 50 colonies might be too many. From my study of the different locations throughout the United States I should say the average locality would not support over 100 colonies to the yard. Heartsease (or "smartweed" as we call it here) never yields honey, and yet in Nebraska and other of the Western States it is quite an important honey-plant. Locality again, you see. —Ed.]

D. M. MACDONALD, the able correspondent of the *British Bee Journal*, referring, no doubt, to what was said about foul brood in GLEANINGS, pages 468 and 524, says: "I should like to disabuse the minds of Americans of the prevalent idea there, lately expressed by Mr. Scholl, Dr. C. C. Miller, and Mr. E. R. Root, that the disease here is of 'a milder form than the disease we have here in America.' It can be as virulent here as there, and as destructive. *Bacillus alvei* is the same everywhere." What was said in GLEANINGS had more especial reference to foul brood in Europe. To be sure, *Bacillus alvei* is the same everywhere, as Mr. Root expressly said, page 524, but, as he there added, "the same microbe, under some conditions, might be much more destructive than under others." Certain it is that in some parts of Europe, probably where it has prevailed for a long time, it is much less violent than in other parts where

it is more lately introduced, so that some European writers have been inclined to speak of two forms of foul brood. I had not thought there was any great difference between England and America as to the violence of foul brood, although there is probably more virgin soil for it to work upon here than there; and on that virgin soil it would not be strange if it were more severe.

IF YOU HAD taken the trouble to ask me in advance, Mr. Editor, whether it wouldn't be a good plan to make an outdoor feeder out of a honey-can with holes punched in it, I think I should have told you not to waste time fooling with it. With your explanation, page 855, and especially your philosophy as to the bees tumbling down under the can, which has interested me exceedingly, I don't wonder that you are enthusiastic about it, and I feel as if I'd like to get a can—guess I must—to try it. [I am very sorry, doctor, but later experience with the inverted can with holes punched in the top leads me to believe it is not quite ideal yet. It is far better than a grooved board in that it makes the bees consume time in getting a load of syrup, but still allows them to struggle some and tug away at each other yet. I am coming to believe that the best solution of the outdoor-feeding problem is that suggested by W. L. Porter, of Denver, Col., namely, spraying the syrup on hive-covers, boards, or sheets spread on the ground. It would be still better if the syrup could be scattered in minute drops with an atomizer, the drops about an inch apart. We must approach as nearly as possible the conditions furnished by a clover-field—here a little and there a little, but that little so *very* little that the bee is obliged to visit possibly 25 to 50 blossoms or flower-tubes before it gets a full load—Ed.]



GOVERNMENT WORK.

I suppose few of us really believe in paternalism in governmental affairs. We believe in individual effort, and are proudest in that which calls from the individual the best that is in him; yet I am proud of the work that our government is doing for the people. That this is commendable appears in the fact that foreign nations are praising the Agricultural Department and its research in practical directions more than any other one of our characteristics. I doubt if there is a more able, honest, and unselfish body of scientific workers to be found in the world than are associated together in our own Agricultural Department at Washington.

BEES TO THE FRONT.

It fairly made my blood tingle the other day as I went up through the magnificent lawn from Pennsylvania Avenue to the main building of the Department of Agriculture, to note in a very prominent place on the lawn to the left of the main entrance a beautiful well-equipped apiary. At first this would seem strange; but why? An observatory or even a weather-gauge would cause no remark nor create any wonder; yet not the moon nor the stars, nor even our control of the weather, plays anything like so important a factor in the real welfare of the people as do the little bees that populate these same hives. It is good that the bees conserve nectar that would otherwise go to waste. It is good to have this food, par excellence, saved to nourish our people. Yet the function of bees in pollinating plants is indefinitely more important to us as a people and as a nation. Successful agriculture lies at the root of all success. It is of the greatest moment, then, to foster that which pushes for success on the farm. There is hardly any one thing in the economy of nature that helps so much toward success as do bees in their great work of cross-pollination of plants. It occurs to me that two of the greatest discoveries in modern science are, first, this work of cross-pollination by the honey-bee; and, secondly, the even greater work of our minute bacterial friends in their operations to increase the fertility of our soils. I need say no more in explanation of my appreciative pleasure in seeing this apiary in so prominent a place on the agricultural grounds at Washington.

DR. E. F. PHILLIPS.

It was my pleasure two days ago to spend a considerable period with one of the assistants in the apiarian division of the Bureau of Entomology, Dr. E. F. Phillips. He is well known to GLEANINGS and its readers. Indeed, he and we have reason for gratitude for what The A. I. Root Co. has done for him. Is it not one of the grandest characteristics of the science of to-day that it is most pleased when it is utilitarian? The science that helps may not be the best science, but it is certainly better that it helps. Dr. Phillips recognizes this fact, and so he spent his vacations, even while yet in college, at the very hub of apiarian activity on this continent if not in the world. That he got a very valuable if not the best part of his education right here goes without saying. I am exceedingly pleased that Dr. Phillips is selected to take charge at Washington during Mr. Benton's absence. I believe it is a wise appointment. Dr. Phillips has a thorough scientific training. He is enthusiastic in the direction of the bee and the apiary. He has a natural adaptability to work and study in this direction. That we shall see results from this wise choice I have not the least doubt. I believe Dr. Phillips will give to all our bee journals the points of interest and value which he may

develop in the lines of research under his charge. Dr. Phillips took as his thesis work, while yet an undergraduate in the University of Pennsylvania, the subject of the wax-glands in the honey-bee. Later he did extensive work on the subject of parthenogenesis, the truth of which he demonstrated by his own research while yet in the University. We see, then, that we could hardly have a man better fitted for such lines of investigation than is Dr. Phillips.

THREE IMPORTANT LINES OF INVESTIGATION.

Here, again, the government had best do that which the individual is unable to do, or, mayhap, from the circumstances will not do, and yet that which promises advantage to all practical workers in the field. I had a long talk with Dr. Phillips regarding this research work. He feels as enthusiastic as I do regarding the importance of determining in what sections of our country apiculture may be practiced with certainty of success. It is well to gather up the nectar from the flowers of every part of the country. It is far more important to do any thing that shall scatter apiaries broadcast throughout our land. We have all admired the intensive agriculture of the Old World. Is not one feature of that intensity that which, perhaps, helps most to bring greater remuneration, the greater abundance of bees, and thus the more thorough cross-pollination of the various vegetables and fruits which swell the earnings of the tillers of the soil? I believe this is a matter of the greatest economic importance to demonstrate in just what sections of our great country apiculture will succeed. I believe they are far more numerous than we wot of. Of course, in time we shall find that out from individual effort with no help from the government; yet this will be very tardy, and very costly tardiness. I have no doubt that Dr. Phillips will counsel research in this direction. From his evident ability we may be just as sure that his suggestions will have weight with the powers that be.

The second line of research, which is very desirable, is in the line of the importation of new varieties and species which may promise improvement to our bee-keepers. Mr. Benton is now in the East working in these lines. It is doubtful if any one else in the world is so well fitted for this work as Mr. Benton. It may be that we shall get no improvement; but so long as there is unrest among our most enterprising bee-keepers, and a desire to try these foreign bees, just so long there will be a waste of energy that we can ill afford. It is to be hoped that Mr. Benton will bring us something valuable in the practical work of the apiary. If this is impossible we may rest assured that he will settle the matter, and so we shall deem it no longer necessary to agitate exploitation in this matter.

The third line of research has to do with the improvement of our races, and why not? We have improved our cattle, horses, sheep, and hogs to a marvelous degree.

The bee would seem to be most susceptible in lines of variation and development. The student of bees is amazed at what natural selection has done for this species. Is it not marvelous that the queen-bee will lay nearly double her weight of eggs each day in the busiest part of the year? And why has the bee such wonderfully varied functions, and a correspondingly varied anatomy, except that it is ever ready to vary, and that these variations are easily fixed? Dr. Phillips has already commenced actively to investigate in this line. This is not the work of an hour or of a year, but may require a score of years. Indeed, this is one reason why it is, eminently, work for our government and not for the individual. I believe we may safely count on Dr. Phillips giving us great benefit in this line of his work. Let us all encourage him by word and by friendly letters.



FOUL BROOD.

Look out for foul brood now. In a season of scarcity like this it is much more likely to develop than at a time when honey is coming in freely. If you are not keeping close watch of your bees yourself, better send for the inspector to look them over.

MANUFACTURED HONEY AND EGGS.

The *Denver Post* recently made the statement, in answer to a correspondent, that not only both comb and extracted honey were manufactured and largely sold, but that eggs were also manufactured. I had hoped that no newspaper in a State that produced as much honey as Colorado would be found so lacking in discretion; but perhaps there is no newspaper employing a large staff of writers that does not occasionally have need of the services of the fool-killer.

SWEET CLOVER.

Prof. Richards, botanist of the Kansas Experiment Station, writing in the *Kansas Farmer*, says that sweet clover contains in its leaves and stems a bitter substance which renders it extremely distasteful to stock, and that, so far as he has ever seen or heard, they will never eat it except under compulsion or as a last resort from starvation. Doubtless the professor makes this statement in good faith; but the wonder is that any one of such extremely limited practical experience should be in such a position. Nor does lack of experience excuse a man for such statements as the following: "The

only value that the white sweet clover possesses lies in its qualities as a bee-plant. It also serves to hold embankments and gullies which are in danger of washing. But, unfortunately, its advantages in the directions named are in most cases more than offset by its disadvantages as a positive weed. It rapidly takes land, both in pasture and in cultivation; and as it seeds very liberally its rate of increase is tremendous."

THE HONEY CROP.

The honey crop shows no signs of improvement, and it is all but settled that for most of our bee-keepers the season is one of absolute failure. Little or no honey has been secured, and many of the bees will need feeding to get them to winter safely. I have lately returned from a trip through the Plateau Valley, one of our best honey-producing districts. They have had a little honey there, though the most sanguine estimates were that there would be a third of a crop. In many cases this estimate would plainly be too high unless the remainder of the season should prove good, of which there was a fair prospect.

SEPARATORS IN SHIPPING-CASES.

One of the greatest defects in our present system of marketing honey is that no provision is made for the proper handling of honey after it leaves the case in which it is shipped. Here is a substance of a delicate and fragile nature, easily injured by contact with almost any other substance, protected only by a narrow rim of wood around its edges, with two surfaces each at least four inches square entirely unprotected. The grocer sells usually only one section of honey at a time, which may or may not be wrapped in paper or put into a sack, and is then put into a basket with other articles, to take its chances in a rough-and-tumble ride over the streets until it reaches its destination. Is it any wonder that many times the chief charm of section honey, the delicate beauty and daintiness of appearance, has disappeared before it reaches the table of the consumer? This is, after all, the court of last resort. It matters not if the honey looks beautiful in the honey-house of the producer, in the warehouse of the jobber or commission merchant, or in the store of the retailer. If it is not inviting in appearance after it reaches the consumer, all our efforts have been in vain. "Plain" sections are very much worse in this respect than the ordinary style, in which the projecting edges protect the honey somewhat, and this, in my opinion, is one of the most serious objections to the plain section. In order to protect against the damage done in shipping, when one comb breaks loose, and then, by pounding against its neighbors, breaks or damages several others in the same row, separators have been used to some extent. They are useful for this, but they may be made to serve an even more important purpose. Let these strips of thin veneer be scored, as

berry-box material is, so that they can be easily broken into pieces the size of a section; then when a section is wrapped up one of these thin boards can be placed on each side, or on the exposed ends when several are wrapped up together. This makes a perfect protection for the honey at far less cost than the paper cartons, which have, moreover, the disadvantage of hiding the comb surface.

I used these scored separators to some extent a number of years ago, and would have used them much more largely, except that I found it difficult to get them made unless ordered in larger numbers than I could profitably use.



WHAT THE PUBLIC KNOW ABOUT OUR BUSINESS.

When we come across some unusually glaring instance of misrepresentation of our industry in the newspapers we are apt to be indignant at what seems the malicious intent, or to marvel that such stupidity should be found in such a position. Just remember that the ordinary newspaper reporter is only an average mortal; and, though he may be well educated in certain special directions, he is just as apt to be densely ignorant of what lies a little out of his experience as any one else. We do not appreciate how little the general public know of what is a matter of every-day knowledge with us. We sometimes wonder why more honey is not consumed. It is an actual fact that there is a considerable proportion of our population who not only never taste honey, but who scarcely know what it is. I was once delivering some honey in an Illinois mining town when my attention was attracted to a group of street urchins who were excitedly discussing the question of what it was that I had in my wagon. Finally a ten-year-old settled the question thus: "Aw, I know what them things is. Them's hornets' nests." A year or two ago I hired for a few days a young man of foreign descent, though he had traveled over a large part of the United States. Looking at some honey in sections he asked, "Is that honey?" I assured him that it was. He then volunteered the information, "Lot's of people don't know what them things is. I've seen them boxes in grocery stores lots of times, but I never knew what they was."



ELASTIC SUPPORTING STRIPS IN SHIPPING-CASES.

Twelve or fifteen years ago a western bee-keepers' association offered a liberal prize for a case of honey put up in the best manner for shipment. As I expected to attend the convention I gave some serious thought to the subject, with the idea of capturing that prize. I did not go to the convention, and my ideas were never made public, though some of the principles have since come into general use. Two of the principal features of my system were the use of the scored separators elsewhere mentioned, and sup-

porting strips under the sections, both at that time unknown. The supporting strips, which I used for several years thereafter, differed from those now in common use in that they had a considerable degree of elasticity. This was secured by cutting strips of the ordinary corrugated paper board, such as is commonly used for wrapping bottles and other fragile articles for shipment. The strips that I used were an inch wide, cut across the corrugations. This seemed to be amply wide, as I had opportunity to examine a great deal of honey after a forty-mile shipment, and the corrugations were but little crushed, still retaining a large share of their elasticity. I do not now remember what these strips cost, though they would probably cost more than the drip cleats made of wood. In some cases, though, where the sections were not well filled, or when honey had to be shipped in very cold weather, or in small lots by express, or whenever it would be likely to receive unusually rough handling, it would probably pay well to go to the extra expense as an insurance against damage. If the manufacturers do not supply them you can easily get enough for experiment or for shipping small lots of honey from your druggist or any one who buys goods in glass, as the material is very extensively used now.



NOMINATING OFFICERS FOR THE NATIONAL.

Our past methods of nominating officers have been admittedly unsatisfactory. The postal-card plan followed last year was doubtless an improvement over old methods, but it still leaves something to be desired. What we really need is some plan which will allow of some public discussion of the candidates in advance of the election. We must remember that nearly all of the members of the National have absolutely no acquaintance with the leading bee-keepers of the country, outside of their own locality, except what they have learned of them through the bee-journals. This has made it difficult in times past to make any change in the officials of the Association, as the tendency is to vote for the re-election of the old officer. This is, unquestionably, against the interests of any society. While there are sometimes cases where an officer has done such excellent work, has shown himself such a capable business man that the interests of the organization demand that he be kept in office as long as he can be induced to serve, it is usually far better that changes be made and fresh blood introduced occasionally. No one should be re-elected who has been unsatisfactory in any respect. It is my belief that no man should hold an office for more than two consecutive terms. The editor of the *Review* has advocated the plan of nomination and discussion in the journals; but I believe his suggestions have not been followed to any extent. If any thing is to be done, somebody must make a start, and I will set the ball rolling in GLEANINGS. I nominate for president, O. L. Her-

shiser, of Buffalo, N. Y. Mr. Hershiser is a well-known bee-keeper, a man of liberal education and of known ability and business capacity. He has attended nearly every National convention (an important matter to consider), and has usually been given a place on the most important committees. I believe he would not only make an acceptable presiding officer but an efficient and valuable head to the Association in other respects. There are some men I should like to nominate for other positions, and I might go on and nominate a full ticket, but I should prefer that others take a hand, so I will stop with the head of the ticket, hoping that others will make nominations—the more the better—for all the offices to be filled.



IN my trip east, made in the last few days, I saw an unusual amount of goldenrod in different parts of York State. It seemed to be yielding considerable honey, although it seldom yields any thing here. Buckwheat in Eastern New York must be a tremendous yielder of nectar. The in-rushing bees came in loaded as if they had come from basswood. Elsewhere it does not amount to much as a honey-producer, except an hour or so in the morning.

THE following letter from Mr. W. H. Putnam, editor of the *Rural Bee-keeper*, will explain itself:

Mr. Root:—Many thanks for the nice things you say, page 857. There is, however, a correction I feel I should make, and that is, you should credit those thoughts and sayings to T. K. Massie and not to W. H. Putnam.

River Falls, Wis., Aug. 21.

W. H. PUTNAM.

I stand corrected. But in looking over that copy of the *Rural* I can readily see how I made the mistake. If the paragraph preceding the black dash had been put in small type, perhaps I should not have made the mistake; but the matter in question starts off almost as if it were an editorial, for the black dash apparently cuts it off from that which precedes. My thanks are extended to Mr. Massie as well as to Mr. Putnam.

WANTED—A PERFECT OUTDOOR FEEDER.

THE inverted square can with holes punched in the top (before inversion) for an outside feeder, while a decided improvement over the grooved-board plan, does not entirely prevent the bees from struggling against each other. The result is that in some of our hives many of the bees are shiny-backed. These, we anticipate, will die early. A perfect outdoor feeder is yet to be discovered.

THE HONEY CROP FOR 1905; PRICES.

CONDITIONS have not changed materially since our report on page 857. Michigan and Ontario still stand out in the lead in securing a fair crop of honey, and the other Northern States report from a fourth to half a crop. There will be a late fall flow in many of the Eastern States. Indeed, buckwheat, goldenrod, and other fall sources, give evidence of a good yield of dark and amber honey. The reports are still discouraging for Colorado and Texas. Wm. Rohrig, Secretary of the Arizona Honey Exchange, reports for that Territory from one-fourth to half a crop. Reports from Nevada and Utah are rather unfavorable, and the same may be said of Idaho.

There will not be very much Western honey in competition with the Eastern product. While the crop of white honey in the Northern and Eastern States is about the same as last year (and last year was below the average), yet the fact that there will be practically no competition from the West ought to make a stiffening in prices on Eastern honey. Until further notice the trade would be warranted in offering an advance over last year.

THE HONEY-PRODUCERS' LEAGUE GUARANTEE CIRCULAR.

THE Honey-producers' League, with headquarters at Chicago, G. W. York Manager, has succeeded in getting the leading manufacturers of bee-keepers' supplies to furnish at their own cost, with the shipping-cases, a guaranteed-comb-honey circular intended to aid in dispelling the belief that comb honey is ever manufactured. It is the intention that one of these leaflets be put out with every shipping-case by the producer, so that the general public may be properly informed concerning the contents of the case. The full text of the leaflet is as follows:

TO THE PURCHASERS OF THIS HONEY.

The producer of this Comb Honey, and also the undersigned, guarantee that the product in these sections, or small frames, was all made by honey-bees.

There is no such thing as manufactured comb honey. It never was made and never can be, newspaper and magazine articles to the contrary. If any one says there is such a thing as manufactured comb honey on the market, just tell that person that the National Beekeepers' Association, an organization of over 2000 members, through its General Manager, N. E. France, of Platteville, Wisconsin, will pay \$1000 for proof of such machine-made combs filled with glucose or any other cheap syrup, and capped over by machinery without the aid of bees. Also, a corporation capitalized at \$300,000, all paid in, has had for many years a standing offer of a like sum for the same so-called manufactured comb honey as described, and the offer is still good. In addition to this, the bee-expert, a life long bee-keeper, now in the employ of the Department of Agriculture at Washington, has repeatedly, in government bulletins and in public addresses, denied the existence of any such product. For evidence of this fact, refer to the report of the Secretary of Agriculture for 1904, page 83; also to Farmers' Bulletin No. 59, for 1905, pages 32 and 34, also issued by the Department of Agriculture, entitled "Bee-keeping," by Frank Benton.

It may be well to state that the basis for these comb-honey canards is possibly due to the fact that the flavor of honey in one locality may be very different from that of another; that when one tastes of a honey quite different in color and flavor from that which he used to eat on the old farm, he concludes it is adulterated or manufactured, especially if it be of poor quality. As a matter of fact, the comb honey from California is just as

different from the article produced in the Central and Eastern States as the fruits of that State are different from those in New England. In the same way, the honey from Texas differs very widely from that produced in Ohio, or honey from Florida from that in Texas. Some honeys, like that from buckwheat, are very dark; others are not only dark but ill flavored, and should never be sent to market, but be sold to the baker or fed back to the bees for rearing young bees.

Two-thirds of the States in the Union have pure-food laws; and one may rest assured that in all the States where such laws are in force, both honey in the comb and in the liquid condition, generally called "extracted," is and must be the genuine product of the hive.

The oft-repeated misstatements about adulterated honey and manufactured comb honey in the newspapers and magazines has made it necessary for The Honey-producers' League to put out this statement, for the reason that the general public has come to believe that a large part of the honey on the market is adulterated or manufactured. If the dealer will join with the bee-keeper in helping correct these monstrous lies, it will materially increase his sales of both comb and liquid honey.

THE HONEY-PRODUCERS' LEAGUE.

George W. York, Manager, Chicago, Ill.

Dr. C. C. Miller, President, Marengo, Ill.

George C. Lewis, Vice-pres., Watertown, Wis.

W. Z. Hutchinson, Sec'y, Flint, Mich.

A. L. Boyden, Treas., Medina, Ohio.

N. B.—Do not store comb honey in a refrigerator, cold storage, or cellar. These are the very worst places you can put it. It should *always* be put in the warmest and driest room you have. It is advisable to keep liquid or extracted honey in the same warm dry place.

If the Honey-producers' League had never done any more than to get the manufacturers to assume the cost of the printing of a circular of this kind it would have fully served the purpose of its organization. These leaflets will go to the very fountain head of the comb-honey lies—namely, the grocer and his smart clerk, who have often repeated the story about manufactured comb honey, and are keeping it alive. But these same smart chaps have always some real honey for sale. Bee-keepers all over the country, if not already supplied with these circulars for shipping-cases, should send to Manager York for some. They will be supplied by him at the rate of 50 for 10 cts., postpaid.

NOMINATIONS FOR THE NEXT ELECTION OF OFFICERS OF THE NATIONAL BEE-KEEPERS' ASSOCIATION.

The following, just received from General Manager N. E. France, will explain itself:

The following terms of office expire Jan. 1, 1906: President, J. U. Harris; Vice-president, C. P. Dadant; Secretary, W. Z. Hutchinson; General Manager and Treasurer, N. E. France; Directors, J. M. Hambaugh, C. A. Hatch, Dr. C. C. Miller. All members are requested to send me on postal or by letter by Sept. 20 their nominations for above offices. The two receiving the highest number of votes for each office will be considered the candidates to be voted for at the November election.

Platteville, Wis., Aug. 22

N. E. FRANCE.

The *Review*, in commenting on this, calls attention to the fact that we have been in the habit of giving the President two terms and then passing the honor to somebody else—usually the Vice-president. The present incumbent, Mr. Harris, having had two terms, he suggests for President the present Vice-president, Mr. C. P. Dadant, of Hamilton, Illinois. More than any other bee-keeper in this country, perhaps, he is a representative of the bee-keeping industry of two continents. The name "Dadant" in nearly all of Europe is emblazoned out strong on the apicultural horizon. That

the same name enjoys no less the confidence and esteem of the bee-keepers on this side of the big pond is equally true.

Elsewhere in this issue Mr. J. A. Green nominates Mr. O. L. Hershisser, of Buffalo, N. Y. As he is a lawyer by profession he would, of course, make a good presiding officer. He is a practical bee-keeper, owning and operating several hundred colonies. In the work of the National he has always taken a leading and active part. Both men are worthy of consideration.

As a candidate for Vice-president, Mr. G. E. Hilton, of Fremont, Mich., a bee-keeper of many years' experience, and a parliamentarian of the first order, is mentioned.

As Secretary to succeed himself, our brother suggests Mr. J. A. Green, of Colorado, so well and favorably known to our readers.

As to the General Manager, Mr. N. E. France, Mr. Hutchinson doubts if we could ever secure a better one than the present incumbent, and I believe the great majority of the members share that opinion.

While it has been the custom to pass around the honor of the other offices, yet as a matter of fact there are very few who are both available and at the same time fitted to fill so important an office; and when we have a good man it possibly might be well to hang on to him. Still, as a possible opposition candidate, Mr. Hutchinson would suggest the name of Mr. Frank Raufuss, of Denver, Col. He would be peculiarly well fitted for the position; but knowing him as I do, and believing that he is already overworked in his present position as Manager of the Colorado Honey-producers' Association, I doubt if he could be prevailed on to accept the office.

As a successor to Mr. J. M. Hambaugh, as Director for California, Mr. Hutchinson suggests the name of Mr. M. H. Mendleson, one of the most extensive bee-keepers in California.

For Director for Wisconsin, to succeed C. A. Hatch, he would suggest another equally prominent Wisconsin bee-keeper, Mr. Franklin Wilcox, of Mauston.

To succeed Dr. C. C. Miller, in Illinois, he names M. M. Baldrige, of St. Charles.

There you have the whole lay-out; and while, as Mr. Hutchinson says, some may differ regarding the merits or choice of possible candidates, he feels that nominations ought to be made by some one who knows the men. Without some discussion the members themselves might be at a loss as to who are available or well fitted for the positions mentioned. There is nothing to prevent other nominations being made. In endorsing these names GLEANINGS has no desire to "run" the Association, but believes that the "slate" suggested is well worthy of consideration. On the other hand, there may be some old officers who should be retained.

N. B.—On reading the foregoing, one might surmise that the *Review* and GLEANINGS editors had had their heads together, but such is not the case.

THE ALEXANDER BEES; THE ROAR OF BEES
IN FLIGHT FROM ONE YARD OF
750 COLONIES.

I HAVE just returned from a thousand-mile trip (by rail), among the bee-keepers of the East. When I started out I had no expectation of seeing any others than Mr. E. W. Alexander in the height of his buckwheat-honey flow, and Swarthmore in his queen-rearing operations; but incidentally I saw a few others. I have gathered some valuable material and data which will, as space permits, be placed before our readers.

Day before yesterday, Aug. 22, I stood in Mr. Alexander's mammoth bee-yard, located at Delanson, N. Y., watching the bees come in from the fields of buckwheat and goldenrod on the distant hills. I have been in a good many apiaries, have *traveled thousands of miles to see bee-keepers*, but I never saw the like before. If you can imagine ten or twelve swarms all in the air at once you can have some faint idea of the tremendous roar of bee-flight of the Alexander bees to and from the aforesaid fields. I had purposely timed my visit to take in this wondrous sight; and, while my expectations had been raised very high, I simply stood spell-bound at the incessant streams of bees coming in from all directions. Why, say, I doubt if any one could have fired off a shotgun toward the horizon without killing many bees. Just think of it—*750 two-story colonies all in one locality*, bringing in honey at the rate of *a ton and a half a day*, weather permitting! Just imagine, if you can, that, in their wild rage for honey from buckwheat and goldenrod, one-half of the bees, say, are in the air. Estimating each colony to have about six pounds of bees, this would make in the air 15,000 bees per colony that are either going or coming from the fields. Multiply this number by 750, then focus the flight to and from one spot, all in one yard. You can imagine the rest.

Mr. Alexander has consented to prepare a series of articles, fully illustrated by a series of photos that were taken on the spot by myself and Dr. Lyon. As he has said, he has been willing to sacrifice a whole crop in order to learn something; the result of his many years of close observation and experimenting will be focused down into a valuable set of articles which will appear in forthcoming issues of this journal.

It may be inferred from what I have written that Mr. Alexander's locality is a veritable bee paradise. Such it undoubtedly is *some seasons*. Some may conclude that would be a good place in which to locate. Perhaps; but would it be fair or right to put some bees in Mr. Alexander's bee-range? There can be only one answer from a moral point of view, and I hope no one will do it. Mr. Alexander's bees cover a radius of some three or four miles; and if any one were to place some bees just outside of the territory, he would infringe on the rights of some *other* bee-keeper. Black brood is not all cured in Eastern New York, and an "outsider" would run a fearful

chance. As a rule, a desirable location is generally taken up by "oldtimers" who know it thoroughly, and a new comer unacquainted with the conditions would have very little show.

A VISIT WITH SWARTHMORE.

From Delanson I went straight to the Swarthmore queen-rearing yards near Philadelphia, and had the great pleasure of seeing Mr. Pratt demonstrate to the satisfaction of several of us that he could do exactly what he has claimed. Several bright brainy bee-keepers, and among them Mr. J. Hooker, an English bee-keeper of note, have told me that this man was a genius, and that there was probably no bee-keeper in the world who knew actual bee-life more thoroughly than this mild-mannered queen-breeder. When he showed his method, and demonstrated what he was able to do, I felt as if I were indeed standing at the feet of a genius.

A GENIUS IN THE PRODUCTION OF FANCY
COMB HONEY.

Quite by chance, and most unexpectedly, I ran across another genius, but this time in comb-honey production, in the person of Mr. S. D. House, at Camillus, N. Y. He is not only a genius in the production of comb honey, but an expert in making demonstrations of practical work among bees inside of a bee-tent or cage, said cage being a part of his honey and wax exhibit located in one of the main buildings of the State fair at Syracuse. The system he has adopted for producing an extra quality of fancy comb honey involves the use of the Betsinger wire-cloth separator, plain sections, and super. This, in connection with a system of comb-honey production that he has worked out, produces a class of comb honey that is a large percentage fancy. He demonstrated to my satisfaction that his system, in connection with the Betsinger super, will produce a grade of honey far superior to that produced by even the fence system.

He likewise has consented to tell us some of the fine points of the new system. I said "new;" much of it is indeed old, for it involves the use of the Betsinger wire-cloth separator that was, many years ago, prematurely condemned and buried out of sight until this genius dug it up.

ANOTHER COMB-HONEY LIE BEARING THE
SEMBLANCE OF OFFICIAL RECOGNITION.

IN Northern Ohio a statement got into some of the local papers — one at Port Clinton and another at Bellevue, to the effect that the Pure-food Commissioner of Ohio had broken up a band of medical students who were selling manufactured comb honey — combs made of paraffine, etc. We immediately wrote to the Ohio Pure-food Commissioner, asking for the facts in the case. Here is his reply:

OFFICE OF
DAIRY AND FOOD COMMISSIONER, }
COLUMBUS, O., Aug. 10, 1905.

Mr. Root:—I have your letter of August 9, with newspaper clipping enclosed, with reference to the Department breaking up a band of medical students who were paying their way through college by selling spurious

honey, the comb of which was made of beeswax and paraffine. The Department broke up the sale of some spurious honey. The Inspector believed the salesmen were students. I do not know how the report got started in the papers, but there seemed to be a good basis for a newspaper story, and I presume some correspondent drew on his imagination to state that the comb was beeswax and paraffine, and then other papers took it up. No such information could have come from the Department, for the Department has not yet discovered any artificial comb thus made.

HORACE ANKENY, Commissioner.

It is just as I expected. Some newspaper got hold of some stray facts, and made up the usual story. As the Food Commissioner did break up a gang of medical students who were selling adulterated honey, the newspaper clipping has some semblance of official recognition. I hope our readers who run across this story (as it is and will be copied in the papers) will be prompt to make an extract from this journal—tear out this whole page, and mail it to the editor of the paper, requesting, if possible, a correction.



SHAKEN SWARMS, AGAIN.

Some of the Difficulties Explained; When to Shake for Both Comb and Extracted Honey; Large and Small Hives.

BY L. STACHELHAUSEN.

[As some of our correspondents encountered some difficulties the past season with shaken swarms, and others made an entire failure of them, I asked Mr. L. Stachelhausen, the pioneer and the introducer of the plan in America, to review the subject and to explain, if possible, some of the causes of failure. This has been done so well in the subjoined article that no one can fail to understand it in all its different phases. In saying this I think it but proper to state that our correspondent knows more about the practice, both in this country and in Europe, than any other bee-keeper in the world.—Ed.]

By reading different bee-journals I find that a few things in making these artificial swarms are not properly understood by some bee-keepers. For this reason it will not be out of place to say a few words more.

1. There is no agreement about the time when a shaken swarm shall be made. Some say it can be made as soon as the colony is strong enough; others advise waiting till queen-cells are started; and the editor, page 527, even thinks the absconding, which sometimes happens with such swarms, may be caused by shaking a colony, when there was no indication or desire to swarm in the old colony. Whether we shall wait for queen-cells or not depends on circumstances. If we have a strong colony in a large hive, there is no reason why a shaken swarm could not be shaken successfully, queen-cells or none. I have made hundreds of such

swarms without waiting for queen-cells. If we work for extracted honey, and want some increase, the swarm can be made as soon as the colony is strong enough. But suppose we work for comb honey and keep our colonies in small hives (eight-frame Langstroth). We have given a section-super, and probably the bees have already commenced to work in the sections. At such times we should probably get more section honey from this colony if it would not swarm at all. For this reason the proper way will be to wait till the colony makes preparation to swarm; and as we do not want natural swarms we make one artificially because a natural swarm would come out a few days afterward anyhow.

But in my opinion it is better to use a larger brood-chamber in the spring, because we shall raise a much stronger colony in it with less work than in these small hives. When the honey-flow commences we make the shaken swarm, no matter whether queen-cells are started or not, and hive it in a small brood-nest (six-frame Langstroth size), and give the section-supers to this swarm. Generally these colonies in large hives are not inclined to swarm, consequently it is out of the question to wait for queen-cells. The shaking of the bees here is not for the purpose of anticipating swarming, as in the former case, but to force the bees into the sections by a contracted brood-nest without combs. This leads us to another question.

2. Shall the shaken swarm be hived on drone-combs, full sheets of foundation, or on starters?

About 18 years ago W. Z. Hutchinson published a little book in which he described his experiments in hiving swarms on combs, foundation, or starters if worked for comb honey, and at that time this little book settled the question that it is more profitable to hive swarms on starters only in a contracted brood-chamber than in any other way, and the reason was given why it is so. As this is true now just as well as eighteen years ago, and just as well for artificial swarms as for natural ones, it seems there could be no doubt if comb honey is to be produced. Nevertheless, there is room for a question. By the use of starters in the brood-nest a small amount more of section honey may be secured then by the use of full sheets of foundation; but in the later case nicer all-worker combs can be secured without any loss of time and labor. For this reason, at certain times it may be more profitable to use full sheets of foundation in the brood-nest. Every bee-keeper has to decide this question for himself. The use of drone combs is always a loss except, perhaps, when extracted honey is produced, and even then I would not allow it.

The use of empty combs or full sheets of foundation has no influence on the fact that sometimes natural or shaken swarms come out and abscond.

3. This swarming-out of shaken swarms on one of the following days, or of starting

queen-cells on a comb of brood given to them, is the most frequently raised objection to these shaken swarms.

If we shake or brush all the bees of a colony with the queen into a hive and set it on a new stand the old bees will return to the parent hive on the old stand; and as such a swarm, containing young bees only, will never think of swarming out or starting queen-cells, we can give to this swarm capped or uncapped brood. If the same swarm is set on the old stand, and the parent colony on the new one, the bees act differently. The old bees returning from the field, and finding a nearly empty brood-chamber, are very uneasy; and if the swarming impulse is already incited they will very probably swarm out or make preparation to swarm. Some of the old bees may enter neighboring hives and unite with them; even the queen may be killed in the general disturbance. To avoid this, at least one frame of mostly unsealed brood should be given to the swarm. This will keep the colony together.

Whether this frame of brood can remain with the swarm depends on circumstances. Some races or strains of bees are more inclined to swarm than others. In some localities the bees swarm considerably more than in others. Some years are more favorable for swarming than others. Last, but not least, if the colonies are always kept in small hives they are more inclined to swarm than if large hives are used during development of the colony and during swarming time. At such times, which are favorable for swarming, a large part of the shaken swarms, if we let them alone, will swarm out or will make preparations to swarm, and refuse to do much work. If, besides the brood, some honey is given to the shaken swarm the probability of swarming out is still greater; and if the old colony has already started queen-cells the shaken swarm is nearly sure to swarm out. To avoid all this the brood-comb must be removed the next morning after making the swarm, and then we shall have no more trouble.

At other times, if the bees are not inclined to swarm, the brood-comb can be left with the swarm; but the swarm should be examined the following day. If some cells are built of the worker size, everything will go on all right; but if the swarm did not build at all, or made some drone combs, the brood must be removed at once or the colony will swarm out soon.

4. Sometimes the reason for swarming out is that the hive is too small for the swarm, and is overheated by the uneasiness of the bees. This may be so if we give a contracted brood-nest, and over a queen-excluder a section-super. For this reason we should give a full-sized brood-nest at first, and contract it afterward when the bees have commenced to build combs. If divisible brood-chambers are used we should at first give an empty story under the one which the swarm will have permanently, and this empty story should be removed the next day, when the bees have settled down to business.

5. It is said that, by shaking the bees in front of the hive, they crawl in the grass and up one's trousers legs, resulting in more or less stings and inconveniences.

This can easily be avoided if we shake and brush the bees directly into the hive. We set the hive with the frames on its stand, and on top of it an empty hive-body. Into this we shake or brush the bees, and not in front of the hive. It is not necessary that a single bee fall outside of this hive.

6. If we make a number of shaken swarms in one of our yards we avoid shaking two colonies close together. If this should be necessary we work, after shaking the first colony, in another part of the apiary till the first-made swarm has quieted down somewhat.

I think I have explained every thing which could cause a failure in making shaken swarms. I have had much general success with these swarms for 25 years, and have described the way I make them as plain as I was able to do, so that I can't understand why others report failures with this kind of swarms.

Converse, Texas.

MOVING BEES WITHOUT CLOSING THE HIVE-ENTRANCES.

To do this Successfully One Must Understand the Habits of Bees.

BY W. L. PORTER.

I have been interested lately in the many good hints in regard to handling bees in out-apiaries. There is one kink which I have been practicing for some time that has saved me much time. Every season there is more or less moving of bees to equalize yards to form new ones, and often to get bees in better pasture. It used to take me much time to fasten in the bees and get them ready to handle. I found, after experimenting, that in many cases they did better when the entrances were not closed with wire cloth, as, when bees are shut in, they immediately commence to worry and get up a great amount of heat, which is apt to smother them or melt down their combs.

SAVES TIME AND BOTHER.

It certainly is a great saving of time to be able to drive into the yard and immediately commence to load on the bees, and in a few minutes be able to drive off with a load; and when they are at their new location they do not rush out with such confusion as when they are penned in.

I have moved them in nearly every month of the year in this way, and thus far with the greatest success.

LOAD WHEN BEES ARE NOT FLYING.

The loading is always done when the bees are all in, either very early in the morning or late in the evening or on cloudy and cool days when the bees are not flying. The bees are smoked before putting on the

wagon; and if these are inclined to come out while loading, a whiff of smoke is given to them to keep them in until all are loaded. I then cover all with a good wagon sheet.

NO TROUBLE AS LONG AS WAGON IS MOVING.

Then I hitch on the team; and as long as the wagon is kept in motion there will be no trouble, as the bees will cluster quietly in the hives, and a bee seldom tries to escape.

I have moved them part of the distance one day, and the next morning, bright and early, finished the distance. Last year, in February, a party in Boulder County rented one hundred hives of me. When he came for them I told him to try moving them without closing them in. He hesitated, but finally said, "If you will take the risk I will." The bees were moved in three loads, making the thirty miles in one day each time.

FREQUENT USE OF SMOKER.

The days proved to be warm, and the smoker had to be used some while the horses were eating their grain at noon. This method not only saves time, but the bees seem to stand the moving better. Of course, the man who tries this method must be "on to his job," and understand the habits of bees. If the weather is warm there can be no stops on the way.

Denver, Colo., June 23.

[We have had reports like this, and I think we may safely conclude that bees can be moved without closing the entrances; but I would advise every one trying the experiment the first time to have the king-bolt, or pin that goes through the double-tree, so arranged that he can withdraw it instantly and release the team. Then there should also be an attendant on the load, with a smoker, ready for an emergency.]

I know that a colony that is frequently jounced or jarred will soon become quite tractable. The jar frightens the bees into a state of demoralization. But let the hive stand still for a few minutes and the bees will soon recover themselves enough to make things interesting both to the man and team.

We should be glad to get reports from others of our correspondents. In the mean time I propose to have it tried in moving our own bees in from the outyards this fall.—ED.]

THE HOME OF THE HONEY-BEES VISITED

By a Delegation of Schoolteachers from all over the United States. See p. 914.

BY E. R. ROOT.

On the 8th of July a delegation of something like 150 schoolteachers, who were in attendance on a summer school at Wooster University, took the trolley line at that place for Medina. The delegation was headed by Dr. E. F. Bigelow, of Stamford, Ct., one of the editors of *St. Nicholas Magazine*. The

doctor's specialties are nature and science studies, and at this particular time he had just finished a course of lectures before the teachers at the university mentioned. Being an ardent bee-keeper he was the means of getting the delegation of teachers to visit the Home of the Honey-bees in one big swarm, and it was a swarm indeed, with Dr. Bigelow as the king bee.

On arrival at our plant the teachers were provided with bee-veils, then inducted into the theory and practice of bee-keeping at our home yard. The company was divided up into little squads, each squad having one of our apiarists as chief instructor and manipulator, while Dr. Bigelow himself was the presiding genius of the whole thing.

It so happened that a little swarm of bees was hanging on one of our grape-vines. With this as an object-lesson we succeeded in showing how bunches of these bees could be picked up by the handful. We even went so far as to demonstrate to the teachers how they themselves could run their hands into this cluster of bees without getting a sting. It was surprising to see how many volunteered the act. There were, perhaps, a dozen or more who ran their hands clear into the center of the cluster, and carefully withdrew them; and when one after another succeeded in the trick without harm the others were rendered more bold.

So apt were our pupils that we permitted them to pick the frames out of the hives, to handle them, to hunt the queens, watch said queens in the act of laying, examine the brood in its various stages, pick out the drones, and, last of all, lay the bare hand on the bees as they were clustered on the brood. Some exclaimed, "What beautiful little kittens!" "What lovely little pets!" "I never had an idea they were so gentle!" "I did not suppose *any one* would be able to do what we ourselves have done without so much as a sting."

I do not know who it was, but some one conceived the idea of having a group picture taken of the teachers, each holding a frame of brood and bees. The suggestion was no sooner made than preparations were under way for putting the idea into execution. As the bees were very gentle, the doctor suggested that the teachers all lift their veils, while he himself removed his entirely. Some of the teachers had gone; but those who were left formed a semicircle holding the frames in various positions as here shown, and which are here reproduced direct from the photo. Dr. Bigelow himself sits in the foreground with his left foot resting under his right knee. The others are in a half-sitting posture in the foreground, while those in the rear stand at full height.

It was impossible in the limited time to get in the entire group; and then, besides, to tell the actual truth, we were somewhat nervous for fear that a single bee might cause a stampede in the company. The camera was hastily, not to say nervously, set up, and an exposure made, with the

result here shown. If there was ever an evidence that raw beginners can be taught to handle bees, without fear, in a single lesson, it is presented right here. I was under the impression that not a sting had been received; but I learned afterward that one or two of the teachers, accidentally pinching a bee, had received a pointed reminder; but, in strict obedience to orders, each kept perfectly still, brushed out the sting like a veteran, and held up his (or her) frame as if nothing had happened. Several little lectures were delivered that day to the company, and question after question was fired at the speakers. Never was a more appreciative audience at the Home of the Honey-bees.

Most of the teachers had supposed that such a thing as manufactured comb honey was everywhere in evidence in the market; but before they left we took pains to see that every one of them was carefully instructed on that point. They all promised to refute the lie on every occasion presented, and there is no doubt that they will.

Referring to Dr. Bigelow again, perhaps I ought to mention that he is the one who wrote the article on the "Educational Hive." This article appeared on page 476 for May 1st, this year. He has made this particular subject a special study in order that he may instruct teachers and educators generally how to learn bee-life from the standpoint of the nature student.

As a lecturer he was pronounced, by the teachers present that day, as an unqualified success. Indeed, I can personally certify that he had every one fired up to the highest pitch of bee-fever; and wherever he goes I understand he delights his audiences. He has had many calls for lectures in different parts of the country; and if any of our readers should be in the vicinity where he will speak they should be sure to avail themselves of the opportunity of hearing him. While he does not profess to be a practical bee-man, yet from my visit with him for a few hours I saw that he had delved into departments of bee-lore never dreamed of by the practical bee-man. He has promised to write some articles for GLEANINGS, which I think will not only interest but instruct some of the old veterans in the business.

I nearly forgot to say that the reader will see a Langstroth frame in the hands of one of the gentlemen in the right foreground, divided off into six divisions. These divisions are nothing more nor less than little Swarthmore frames which we put into full-sized hives for filling out with honey and brood preparatory to putting in the baby nuclei themselves. One of these frames will supply three such nuclei. And this reminds me that the company here shown was inducted into the science of queen-rearing, also, from the laying of the egg to the full-fledged queen-mother laying more eggs.

It may be interesting to note in this connection, also, that the picture is a practical evidence of the gentleness of the red-clover strain as reared at the Home of the Honey-

bees. At almost any time one may go through this yard without fear of a sting, although there are times when, of course, it is advisable to wear a veil.

The large evergreens in the rear constitute a windbreak on the north. A similar windbreak, not shown in the picture, is on the left, or what is the west side of the yard. One corner of the main building just barely appears in the picture on the right.

BEES AND A "CABIN IN THE WOODS."

Producing Comb and Extracted Honey in the Same Super; Chunk Honey instead of Section Honey.

BY MILLARD A. HUDSON.

In August, 1898, I discovered a small cluster of bees on a rail fence. A hasty investigation showed that they had been deprived of their beautiful home, a fine large beech-tree, by robbers who had carried away a tubful of honey, bee-bread, young bees, and sawdust. I was informed that, if I wanted the bees, I could have them. As I had no hive, a pine shoe-box was converted into a temporary hive by sawing a V-shaped notch in the edge and fastening some of the pieces of comb on the inside. This was then turned upside down on a board. With the aid of a little smoke from some burning rags the bees were driven into the box, which was then carried and placed in our front yard, which was on the other side of the "cabin" at that time. We now live in a new and up-to-date cabin, and this one is used for honey-house and shop. The next year (1899) I did not get any swarm nor any honey.

The following winter I was seized with a desire to learn something about bees and how to handle them with profit. The A B C of Bee Culture was sent for, and also GLEANINGS, and several catalogs of supplies were obtained. After a thorough search of the catalogs and the A B C, an eight-frame Dovetailed hive, with Ideal super and self-spacing frames, was the one decided upon and ordered. In June, 1900, a swarm issued from the pine box, and clustered high in an apple-tree. The new hive was brought out, and, after much climbing and sawing-off of limbs, they were finally hived. This was my first attempt at hiving bees; and since it was not a very pleasant one I decided to clip the wings of her royal highness, which I did according to the A B C. While I have not depended on swarming for increase, this clipping has been a source of satisfaction to me. In 1903 I sent for a queen to replace the old one; but after an examination of her colony, and seeing such full frames of brood, and conditions better than in any of the others (I now had seven), the old queen was *not* beheaded, and the new one was at once allowed her freedom on hatching brood taken from this old colony. Several of my colonies were started from brood taken from this same colony,

two frames being taken this year, and yet after *all* this depletion of brood her colony is strong in bees, and doing very good work. Five years in one hive seems a long time for a queen to live, yet she may be seven years old or more.

The stack of supers shown, and another stack of half-depth supers, not shown in photo, have all been on, and are being taken off full of comb and extracted honey. Mr. D. R. Waggoner's plan of tacking on little strips to the escape-board, page 547, is certainly a good one. I have tried it, and can say that it works well.

While some of the writers are giving their plans for comb and extracted honey from the same colony I will give mine. I start my bees, as early as possible, to storing comb honey in shallow frames with thin foundation, one imbedded wire running lengthwise through the middle of the frame. Bait combs are a great help to mix in with the foundation. As soon as bees are extra strong, or show signs of swarming, all the brood is hoisted up above the excluder, except one frame of brood containing the queen. The rest of the space below is filled in with combs and foundation. In seven or eight days I look for cells above the excluder. If there are any I cut them off, and this settles the swarming with me. As soon as the shallow super (which is on top) is

about completed, another super with foundation or combs is slipped in next to the queen; and as fast as the brood is hatching out above this, the full-depth combs are being filled with honey for extracting. The honey is cut out of the shallow frames in two long strips, and afterward cut into lengths to fit any sort of vessel or bucket. The wire is left in the frame for more foundation. With a little chisel of the proper width the groove in the top-bar is quickly cleaned and made ready for more foundation. I use a glue-pot for melting the wax, and a table-spoon in preference to the wax tube, for fastening the foundation in the groove.

A few of my customers and friends have some peculiar ideas in regard to the genuineness of the honey in the "little square things" at the stores, but my honey they *know* is the real thing.

Like Dr. Miller, I shall not "lie awake nights" owing to the growing scarcity of basswood for sections, but, instead of using a four-piece section, shall stick to my shallow frames.

Greensburg, Ind.

[I do not see that you, anywhere in the article, say any thing about those hives wrapped in paper or oilcloth. If this was for the purpose of wintering we should like to know how it worked.—ED.]



THE CABIN IN THE WOODS AND THE APIARY OF MILLARD A. HUDSON.



A SWARM OF SCHOOLMA'NS AND SCHOOLMASTERS AFTER TAKING THEIR FIRST LESSON IN BE
RED-CL



A SWARM OF SCHOOLMA'NS AND SCHOOLMASTERS AFTER TAKING THEIR FIRST LESSON IN BEE-KEEPING AT THE ROOT CO.'S APIARY, MEDINA; A PRACTICAL DEMONSTRATION OF THE GENTLENESS OF THE RED-CLOVER STRAIN OF BEES.

KODAKING AMONG THE BEES.

BY MRS. E. PRIESTER.

My daughter now and then takes a few pictures. I will send one where a swarm of bees alighted on a boy's hat; also one where I hold the hat in my hand after taking them off his head; also one of my bee-yard with myself and boy in it. As you will see, I make my bee-hats by sewing a piece of wire cloth, such as is used for window-screen, around a common wide-rimmed straw hat, then sew a curtain of mosquito-bar around the lower edge of wire; then I



THE SWARM ON THE HAT.

Conundrum: Did the swarm capture the boy or did the boy capture the bees?

wear an apron like a butcher's, and tuck mosquito-bar under the apron, which gives me a chance to slip my hand under the apron and wipe my face or take a drink, etc. It is much cooler than a veil. I wish the one on the hat were good enough to go into the prize contest, as I think it is seldom a swarm is caught in that way.

I wish Mr. Root would come to this part of California, the Sacramento Valley. You



MRS. E. PRIESTER IN HER BEE-SUIT WITH A SWARM OF BEES ON A BEE-HAT.

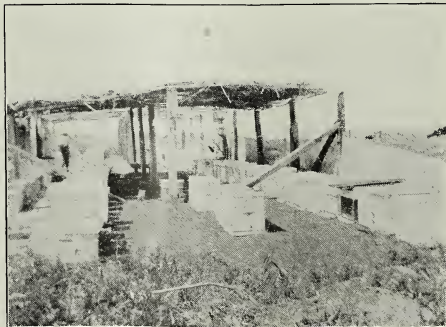
folks think if you see Southern California you have seen it all; but you would find lots of good country and good people here.

I have 113 hives of bees now, but aim to have only 100, so I am trying to learn to keep from increase as long as I keep bees.

I would not do without GLEANINGS, as I enjoy A. I. R.'s writings very much. I have kept bees over forty years, but only about eight years in modern hives. I just run for comb honey. They were box hives.

I was raised in Iowa, but crossed the plains in 1863; am now 53, but will keep bees as long as I am able to attend to them.

Davisville, Cal.



APIARY OF MRS. E. PRIESTER.



FEED FOR BEES AND FEEDERS.

"How has the season for honey proved with you this year, Mr. Doolittle?"

"The crop of white honey is scarcely up to the average this year—probably not more than fifty pounds of section honey to each old colony in the spring. I do not have it all off yet, but judge that fifty pounds will be what I shall get. Have you yours off yet, Mr. Brown?"

"Yes, and it is very little indeed that I have. I do not think I have more than an average of 20 pounds to the hive, and what I have is badly colored and mostly from mustard. But that is not the worst of it. My bees have little honey in their hives, and there is very little buckwheat sown, the farmers having put out cabbage in place of buckwheat, and it seems to me I shall be obliged to feed mostly for winter stores."

"There is scarcely any buckwheat hereabouts, but I think the bees have sufficient for winter stores now, if they can only procure a living from now till October, which I hope they may."

"Well, if you had my prospects what would you do?"

"I think I should wait till about the 10th to 15th of September, and then if the bees did not have sufficient stores for winter, with no immediate prospects of their getting such, I would feed."

"Yes, and that is just what I wished to talk about. How and what shall I feed?"

"Have you any honey in frames hung away for winter?"

"No. If I had, the matter would be simple."

"Then you will have to feed sugar."

"Yes, and I wish to know how best to feed it."

"Some make it into candy, similar to the candy used in the cages for sending queens by mail."

"Yes, I am told so. But is that the best way?"

"That will do where colonies have nearly honey enough for wintering; but if greatly short, I doubt the advisability of so using."

"Well, what would you do?"

"My way has been, where colonies had to be fed for winter, to make a syrup as follows: Put 15 pounds of water into a vessel that will hold from 24 to 30 quarts, placing the same over the fire till it boils, when 30 pounds of granulated sugar is slowly stirred in, so that it will dissolve instead of settling to the bottom and burning."

"Is it liable to do this without the stirring?"

"If the fire is hot, and the 30 pounds is

poured in all at once it is so heavy that it will stick to the bottom and burn before the water will get under it. After you have the sugar stirred in, wait till the whole boils again, when you will set it from the fire and stir in 5 pounds of extracted honey. This will make fifty pounds of feed fully as good as honey for wintering, and some claim better."

"What is the extracted honey put in for?"

"To keep the syrup from crystallizing in the feeders, and possibly in the combs, if the colony is small to which it is fed."

"But I thought that vinegar or cream of tartar was used for this purpose."

"So it is by some; but I find that the honey answers a better purpose, and helps along with the feed just so much."

"But suppose one did not have the honey. What then?"

"It might be well in that case to use the vinegar, as some fear that foul brood might be obtained if the honey of commerce were used. But if you have been prudent you will keep a little extracted honey on hand to use in emergencies."

"Well, after I have the syrup how am I to feed it?"

"At this season of the year I prefer to feed it from feeders, as the bees carry it where they wish it for winter, and seal it up better than they do where it is poured into the combs, as is a good plan in times of scarcity during the fore part of the season."

"But suppose a person has no feeders."

"Then the alternative is to make them or use such dishes or pans as you may happen to have about the house."

"But won't the bees stick fast in the feed, and be drowned, if the syrup is put in such things?"

"Yes, unless you make a float to keep them from doing so."

"How is this float made?"

"Some use pieces of shingles, shavings, corncobs, and such like, but I do not like any of these, as they all soak up quite a lot of the syrup. My plan has been, when using such, to fill the dish with syrup, after which I pull up two or three handfuls of green grass and scatter over it, renewing this grass every time I fill the dish. If a milk-pan is used you will rarely have to fill it more than twice, and generally not more than once."

"I see. The grass being green, and full of sap, it will not allow of any soakage as long as it is green."

"That is correct; and, besides, the bees can work all down and through it, so that not a particle of the feed will escape them, while with other floats more or less of the feed will remain underneath them, as they are too heavy for the bees to move."

"But how do you get the bees to work in these pans?"

"After having the pan filled as I have told you, set it on top of the hive and place over it the cap of the hive, another hive, surplus arrangement, or something of the

kind, making all secure so no robber bees can find their way to it. Set up a small piece of board, chip, or something of the kind, so that the bees can easily climb over to the feed, when a hole is to be opened to the hive below, in some way the most convenient in accord with the hive you use, for the bees to come up through. Now scatter a few drops of feed down through the hole and over the chip, when the bees will attend to the rest, after you cover all up securely. However, if you have a little time at your command to make feeders, you will find them more satisfactory."

"How are they made?"

"From fourth-inch stuff, or something thin like picture-backing. Get out two pieces of wood the same size as one of your frames, less half an inch at the top. Nail these on each side of the frame, fitting the joints together with white lead, so as to prevent leaking. If, after making, hot beeswax or paraffine is run all over the inside, there is no possibility of leakage, and all soakage of the feed into the wood is prevented also."

"I suppose this feeder is to be hung in the hive in place of a frame."

"Exactly. And to fix for pouring the feed in, it is best to bore a hole through the top-bar, the size of any funnel you may chance to have, when, by turning up one corner of the quilt covering your colony, cutting a slit in it over the hole, or boring a hole in the right place, the funnel can be inserted and the feed poured in. If a slit in the quilt is cut, the hole in the same will immediately close on the removal of the funnel. If a hole is bored through the cover, a cork of the right size can be used in closing the hole."

"But how about a float for this feeder?"

"As the feeder is only an inch wide, there is no need of a float, as the bees can easily catch hold of one side or the other of the feeder and crawl out of the syrup, so that very few, if any, ever drown in any feeder not over one inch wide. If the feeder is made wider than this a float of some kind is a necessity."



A NUT FOR DR. MILLER TO CRACK.

I keep a few colonies of bees for our own use. They are full Italians. Early in the spring one threw out an extra large swarm. I had trouble to get it to enter a hive (a Langstroth). In about an hour they left the hive, and divided. One part went to the mountain, and the other returned to the

parent hive. In seven days they swarmed again. I had no trouble to hive them; but the next day they came out and returned to the parent hive. The same colony swarmed ten days later. I hived them in the same hive, but clipped the wings of the queen. In about an hour after they were hived they seemed to be fighting furiously, and the next morning I found a perfect queen in front of the hive, and the bees are doing finely. Now, what was the cause of this swarming? Where did this queen come from? The same hive now (the parent hive) has about as many drones as workers. Would you advise trapping and destroying them? I have trouble to get them to work in the supers. I put in partly filled sections to entice them up, but no good. The large frames are well filled, and there are some buckwheat and acres of white clover; but they do not appear to work much except in the middle of the day.

There were some fine fields of crimson clover, but I could never see a bee working on it.

G. W. REEDER.

Duncannon, Pa., June 20.

[Dr. Miller replies:]

The old queen was with the first swarm. As swarms sometimes do, the swarm settled in two clusters. The one with the queen left for the mountain; the other part, having no queen, returned to the hive. Seven days later a second swarm issued, and the virgin queen may have had defective wings, and may have been lost, so that, although the swarm was hived, it returned to the old home the next day. Ten days later, or 17 days from the issuing of the prime swarm, a later-matured queen issued with a swarm, this latter swarming likely delayed somewhat by weather or something else, and this queen may have been fertilized during the act of swarming, so that your clipping her did no harm, although a risky thing to do. As soon as this swarm issued, another young queen emerged from her cell in the old hive; and when you returned the swarm with its clipped queen, there were two factions, and the faction with the unfertilized queen succumbed, and you found their leader next morning a corpse.

It would be a good thing to destroy the drones, and a better thing to suppress so much drone comb.

Atmospheric conditions or something else cause that sometimes flowers may be in abundance, yet produce no nectar, and that may be the reason the bees do not store in supers.

C. C. MILLER.

HOW TO REQUEEN ON IMMOVABLE COMBS.

I want to requeen two or three colonies, but don't know how to get the old queen out of the hive. They have been in these hives about five years; have movable frames, but some of the combs are built cata-cornered, and so crooked that it is next to impossible to get them out, much less to find the queen among them.

Is this a good time of the year to transfer

by the Heddon method? or would it be better to wait until next spring? How could I requeen during the process of transferring by this method? J. W. STOUTZENBERG.
Greenville, Ill., July 10.

[The colonies that you refer to are practically as though they were in box hives, because the combs are immovable. I would advise you to proceed on the plan of the Heddon short method of transferring, as given in our A B C book. Drum two-thirds of the bees up into a box. Be sure you get the queen. Set the old hive to one side, and a new hive with frames of foundation in its place. Shake the bees and queens into the new hive. When combs are partly drawn out, hunt up the queen, kill her, and introduce another. Of course, you might requeen the hives just as they are by drumming the queen and bees up into the box. Put a strip of perforated metal over the box, then smoke the bees out. When nearly all out, lift the metal and look for the queen, which will probably be in the box, where she can be easily located. Kill her, then introduce an Italian queen on the old combs. But you had better by all means transfer by the Heddon short plan. You will thus be enabled to kill two birds with one stone.—ED.]

AN INCREASE IN WEIGHT OF TWO POUNDS IN A MINUTE AND A HALF.

To-day I weighed one colony of Italian bees in my home apiary — the same I was awarded the third premium in your contest — and send you the particulars, as this is a few days before the white clover will yield any honey. The bees were flying freely, and we placed them on the scale, and they weighed 135 lbs. In a minute and a half by my watch they weighed 137 lbs.; then a storm caught us and we lifted them from the scale on Monday. I am going to remove the surplus and give sections. I should like some of the contributors to GLEANINGS to make an estimate of the number of bees in that colony. I am going to keep a record of this particular colony, for the rest of the season; they are in an eight-frame Dove-tailed hive of four full-depth bodies. The queen had free access to all until 16 days ago, when I confined her to the lower story, as I intend running them for comb honey. There are 47 other colonies in this yard, and very many of them appear to be nearly as strong. ADAM A. CLARKE.

Lemars, Iowa, June 17.

GREASY WASTE FOR SMOKER FUEL.

Mr. Editor:—I wish to extend to you my gratitude for calling attention to the value of greasy waste as smoker fuel. I have been trying it for several days with gratifying success. I wish to say, however, that I do not think you do the subject justice when you simply say that it makes a good volume of smoke and stays lighted a long time. These things are certainly in its favor; but

there are other advantages to be realized in the use of greasy waste which, to my mind, make a stronger argument for its use than the ones you mention. So far as the volume of smoke is concerned I think planer shavings are ahead of the waste; but they do not hold the fire so well. One thing I like about the waste is that, in handling it, my fingers are made *propolis-proof*. One of the chief objections that I have to handling bees is that the propolis is so hard to remove from my fingers. When I leave my bees, to go to my books and papers, it is very difficult to clean the hands so that no mark will be left on the paper. Before I began to use the waste I had to use gasoline and hot soapy water, in the order named, to remove the propolis; but now cold water and ordinary toilet soap remove the propolis without any difficulty.

Another advantage which the waste has over wood is that it does not choke the smoker with creosote; and yet I must say that the smell of burning pine is not so objectionable in my nostrils as that of the waste. In fact, I rather like the odor of burning pine. I have hit upon an expedient to overcome this objection. I mix a few shavings with the waste.

ROBERT B. MCCAIN.

Coal City, Ill., July 22, 1905.

[We have experienced the other advantages you speak of. The oil on the fingers effectually protects them from propolis.—ED.]

FORMING A NUCLEUS.

If I take four frames of brood from a hive with queen-cells in it, the middle of July, do you think it will make a strong colony by fall? BEGINNER.

[Something would depend upon the locality; but ordinarily, if the nucleus be given stimulative feeding, if no honey is coming in it ought to make a good colony for winter. If the cells or the virgin fail, the nucleus will be weaker instead of stronger. The chances would be much better to give a laying queen at the start.—ED.]

UNITING COLONIES FOR WINTER.

Is there any objection to this plan of uniting two colonies, if you don't care to save the extra queen and don't know which is best? Put one colony over the other, with a wire screen between, an outside entrance for both. Leave about three days, then remove the screen and let the queens fight it out. O. S. REXFORD.

Winsted, Conn., July 17.

[The plan is all right, but one queen is quite liable to be better than the other. I would select the better one and kill the other. If both lots of bees are from the same yard the moved lot will give back many of its old bees to the old stand. You may have to return them a second time, then take away the old hive.—ED.]



Praise ye the Lord.—PSALM 150: 1.

Just about three years ago I told you in GLEANINGS of the series of meetings that the Rev. A. T. Reed held at that Bingham church near the cabin in the woods. I told you that, although the people were backward about coming up to the "anxious-seat," as it is called, or standing up for Jesus Christ, yet we succeeded in getting forty signatures to a paper that Bro. Reed and I carried around. This paper read something like this:

"I accept Jesus Christ as my Savior and my guide through life; and I promise to do as he would have me do so far as I am able."

I had hoped and expected that those who signed that paper would sooner or later unite with that Bingham church; but although their good pastor presented the matter again and again, and gave an opportunity for those who were willing to come forward to do so, yet for quite a time nobody made a start. A few of the young ladies did eventually unite with the church, but so far as membership was concerned matters were a good deal at a standstill at the time of our recent visit. But at our first Sunday-school I was told the new pastor had announced that protracted meetings would begin just one week later. This good pastor, Rev. Mr. Shelly, has three other places to preach in so he gets around to Bingham only every other Sunday. Now, it was quite an undertaking to start a series of meetings during the month of August in that locality. Let me explain why:

Besides the ordinary farmwork, such as haying, harvesting, etc., there is just now a large canning-factory at Traverse City, and almost every farmer for ten miles around that cannery has grown one or more acres of string beans. These beans must be picked and carried to the canning-factory when they are just the right size. If left on the vines for even twenty-four hours longer than a certain time they depreciate in value and bring a much lower price. The small beans, say those weighing 300 to the pound, bring a much larger price than those that get large. As a consequence, every man, woman, and child is pressed into service to pick the beans when they are just right. Boys and girls—perhaps I should say girls particularly—often pick more beans than grown-up people. They can stand the stooping over better. These young folks often make a dollar a day, and sometimes \$1.25 and even more. Well, everybody gets so tired at bean-picking that it seems a pretty hard matter to ask them to go to church week days. When I met brother Shelly, and heard him preach, I decided at once that he was out of the common run of

ministers. He reminded me in many respects of dear Bro. Reed. One great feature of his work is singing; and his good wife, although the mother of eleven children, has a remarkable gift in this line. It reminds one so vividly of the methods of the Salvation Army that I asked the question whether she had not at some time in her life been connected with it. She replied that she had not. There is quite a family of grown-up girls, and they all sing like their father and mother, and, I may add, they pray as well as sing. Bro. Shelly said, I think at his first meeting, when objections were made that it was a busy time of the year, hot weather, etc., "Oh! we are going to have a revival."

As he had been recently called to take charge of this little church I was egotistical enough to think that, perhaps, I knew the Bingham people better than he did, and said to myself, "*May be* he will have a revival and may be he will *not*;" but, of course, I prayed that his efforts might be blessed. I think Bro. Shelly will not feel hurt when I tell him that, in the outset, I was prejudiced against his way of having such noisy meetings. Forty or fifty years ago I used to attend (I am sorry to say, sometimes, just for the fun of it) a good old-fashioned Methodist revival; but I supposed the shouting as well as loud praying was mostly a thing of the past. As it was a mile and a half through the woods, and over tremendous hills, Mrs. Root did not attend every evening as I did; but when she did she was shocked at so much demonstration, and especially when there were several praying at the same time. We discussed the matter in the evening after we got home, and both of us felt pained because the meetings were conducted in such a different way from what we had been used to, at least of late years. I think I had better own up that I considered for a moment not attending them any more, as they were so different from what I had been accustomed to. But what would the people of that little church and Sunday-school think of one who had been so active and earnest in urging everybody, right and left, to accept Christ and help build up that little church? Why, I had talked and urged some of my good friends so vehemently that they had been almost offended. Could I consistently stay away from even one meeting? I finally said, "Dear wife, we want to be sure we make no mistake in this matter. Let us kneel down right here and ask God to indicate to us by the Holy Spirit what he would have us do, or make it plain to us whether our good pastor is making a mistake, or whether it is not Satan that is getting hold on our own hearts by persuading us that these people are too noisy and undignified." We knelt down, and I very soon felt the Holy Spirit in my heart directing me to be present at every meeting and to take part in every thing so far as I could conscientiously. From that moment to the time I was obliged to go back to Ohio, ten days or more, my heart was

in full accord with the work. In fact, it seemed to me as if the dear brother kept improving and progressing in every sermon. Now, very likely his sermons were just about the same from the beginning to the end; but it was myself that was receiving a new baptism of the Holy Spirit, and getting on to "higher ground." By the way, there is a beautiful hymn called "Higher Ground," and it got to be one of my favorites before the meetings were closed. I think it is now used in some of the Endeavor meetings and Sunday-schools. It is not only grand in sentiment but beautiful in melody. When you hear it, see if I am not right. I will quote here the first verse and chorus: *

I'm pressing on the upward way,
New heights I'm gaining every day;
Still praying as I onward bound,
"Lord, plant my feet on higher ground."

Lord, lift me up and let me stand,
By faith, on heaven's tableland;
A higher plane than I have found,
Lord, plant my feet on higher ground.

When we first came into the Sunday-school after our long absence I found the Bible-class had a different teacher; and when all the members of the church and those who love the Lord Jesus Christ were invited to come forward this teacher of the Bible-class was not among them. But I was told they had very great difficulty in getting anybody to teach that class; and this good woman consented only after much urging. Please understand that I do not object to choosing a teacher, under such circumstances, from outside the regular membership of the church. It is often done, and I think wisely so. Such teachers often unite with the church very soon after they take a class. It proved so in this case. The teacher of our Bible-class was one of the first to stand up for Jesus. Then the pupils followed here and there; more and more came forward at every meeting; and when a whole seatful of boys or young men came forward in a body I felt like shouting and praising God as loud as the pastor or anybody else. One rainy evening almost every person in the church was persuaded to come forward. Now, friends, some of you may be disposed to criticise, and say it is an easy thing to get boys and girls and others to come up to the anxious-seat, but that they do not hold out. Let us consider the matter a little; and I wish especially to emphasize the wisdom of Bro. Shelly in presenting the matter as he did. One evening he said something like this:

"Dear friends, we invite everybody to come forward who loves the Lord Jesus Christ. This coming forward here does not mean that you unite with this church, nor with any church for that matter. It simply means that you are willing to take a step in becoming a follower of Christ. You can take this first step if you choose, and never take another one. It all rests with you; but if you take this first step, and you get a

blessing in so doing, we expect you will, of course, take the second step at the next meeting, and so on. You can take the first step in one minute; but it takes a lifetime to become a matured full-fledged Christian. Will you come?"

Perhaps I have not got it exactly as Bro. Shelly expressed it. I will say, for the benefit of our older readers, that among the recent converts was my friend Earl Rosa, who has worked for me for several years past, and Orville Heimforth, a young farmer whose land adjoins mine, and a lot of other boys just turning from boyhood to manhood. Alice Hilbert, of whom I have frequently spoken, is now a member of the church, a teacher of the infant class in Sunday-school, and one who is always ready to stand up in the very front for Jesus.

When Bro. Reed was here, some made the objection that he had got only a lot of children; but, three years added to the ages of those children has almost made them men and women; and those who were on hand at all the meetings a few years ago were the first to come forward at this time; and among the new converts there was quite a sprinkling of middle-aged and some elderly people.

During one of the last meetings when, as usual, there were several praying at once, the leader almost startled me by saying, "Now let several pray. Let us have a dozen prayers all at once." Talking about it afterward, the objection was made to me, "Why, nobody could hear a word if a dozen were all praying at once." I answered instantly, "That may be true; but if God hears, does it matter so very much whether anybody else hears or not?"

As there has been considerable said about emotional religion or emotional meetings, suppose we consider the matter a little. You who read our religious papers may have noticed frequent comments on the fact that many denominations at the present time are hardly holding their own in the way of membership. The number of converts does not equal the number of removals by death and otherwise; and several denominations are seriously asking what is the matter; and I believe some learned divines have at least suggested that it did not matter very much: that people who do not unite with any church are, perhaps, getting imbued with the spirit of Christianity. This might do very well if we were not obliged to confess the fact that iniquity and crime are becoming rampant in our land; and even some who are members of our various churches are getting so far away from their religion that they are found connected with stupendous grafts, and misappropriation of money that belongs to the people, etc. The teachings of the Bible seem to have been forgotten and trampled under foot as it was in the time of Jeremiah and other prophets. If the old-fashioned religion and emotional revivals would help us to read our Bibles more and pray oftener for the influences of the Holy Spirit, shall we not extend a helping

* From "Songs of the Living Way," published by the Pepper Pub. Co., Philadelphia.

hand and welcome the old-fashioned emotional religion?

During these meetings I have been speaking about, it was a common thing for people to come two and even three miles, many times crosslots, through the woods to the meetings. Here is another point I wish to make:

In inquiring of our young married people around Medina why they are not seen at church as often as formerly, many times the excuse is presented that there is a baby in the household. Sometimes I am told they can not both come at once on account of the baby, and so they take turns. Well, I am glad to see them take turns; but at that Bingham revival I have just told about, the baby does not hinder, for these seekers for "higher ground" take the baby along, even to the extent of carrying it half a mile or a mile through the woods and over the hills. At one of the meetings there were at least a dozen babies; and when the meeting got noisy the babies helped to make it noisier still. But they were not all crying; and, finally, I want to tell you the minister's wife, who is such a wonderful singer, came to meeting several evenings bringing her baby, the latest arrival of the eleven; and when she was singing those beautiful soul-stirring pieces the baby that lay on the bench all alone was cooing, and kicking up its feet, waving its hands, and rejoicing with the rest. If it was not happy over the new converts its beautiful little face showed that it was happy with the rest of us. *God* knows why, even if *we* do not. Now, when people become so much interested in the gospel of Jesus Christ that they can work hard all day picking beans, then walk several miles after their work to meeting, and take turns in *carrying the baby besides*, such religion *means* something. It costs something, and it is worth something after we have got it.

Some of you may say these children and others will ruin their health by overwork. I wish you could come to that Bingham Sunday-school some morning and see whether these people look "ruined" in health. I have had my eye on several in particular who, I feared, were working too hard three or four years ago when they were from twelve to fourteen years old. They are now splendid specimens of robust strength and beauty. It does not hurt people to work pretty hard occasionally in the open air, especially with that beautiful air to breathe that we have all round about the Grand Traverse region.

Once more in regard to holding out. If these young people who have taken that first step do not keep on and hold out, it is largely your fault and mine; for we who are older should see to it that they do hold out. Remember what Jesus said in his parting admonition to poor frail Peter. Twice he said, "Feed my sheep;" but previously he said, "Feed my lambs." By the way, I do not know of any more glorious work for a man or woman in this world of ours, espe-

cially elderly people, than looking after the sheep and lambs, and seeing that they are kept in the straight and narrow path that leads to the kingdom.

Mrs. Root and I spent a great part of our time during the three weeks we were there in going off through the woods to visit the neighbors, and it was a joyous three weeks. May God be praised for that revival which I was permitted to take part in, even if it was in some respects a noisy one.

Praise ye the Lord.

I copy the following from the *American Issue*; and it expresses so well what I have been thinking of and praying about for many a long day that I rejoice in the opportunity of giving it a place before our readers. How many are there in the United States who will say amen to the following, from the pen of Abraham Lincoln?

REVERENCE FOR LAW.

Let reverence for law be taught in schools and colleges; be written in primers and spelling-books; be published from pulpits and proclaimed in legislative houses, and enforced in the courts of justice; in short, let it become the political religion of the nation.

HATCHING CHICKENS OVER A BEE-HIVE — MORE ABOUT IT.

On page 527, May 15, I said I had written Mr. Decker for particulars about his discovery, etc., but that nothing had been received from him. I wish to apologize to him, for a brief statement *was* received from him; but as it was contained in an order for queens it did not get to me at the proper time. When I got ready to use it in print it was, unfortunately, mislaid, and I asked him to repeat briefly what he had written. In reply to this we got the following:

Mr. A. I. Root:—You have written to my father, H. Decker, about hatching chickens over bee-hives. He has hatched them so ever since 1895 until the last two years, or since mother died. He has not kept poultry since, so has not tried it, but says he will another year if he keeps well. He has had letters from all over the world about hatching eggs—more than he could possibly answer, and I have answered a good many for him, and he asked me to answer this for him. Yes, he received the queens, and they are doing finely. If you would like another statement about how he hatches them I will try to make it as plain as I can.

Rome, Ohio, Aug. 3.

MRS. R. H. HIGLEY.

Many thanks, Mrs. H., for your kind reply; but as the matter has been gone over so thoroughly in all sorts of papers I think we will not ask you for any further statement. I think Mr. Decker told us in the letter I have lost that he never made the claim that a colony would give a big yield of honey, and do the work of "eight sitting hens" all at one time. See the May number referred to above. The present statement informs us that Mr. Decker has made no experiments for the past two years. From this our readers can judge what a poor foundation we have for the extravagant statements in the *Scientific American* and no end of other periodicals that wanted to give their readers something sensational.

Mr. Decker is an old man, and we may on this account pardon his boyish enthusiasm in the matter; but we can not so readily pardon the periodicals that have sent out the absurdly extravagant *resumes* of the matter. Finally, as no one has as yet, in answer to my repeated calls, mentioned any sort of success in hatching eggs over bee-hives, I hope no one who sees this will waste good eggs and annoy the bees further by any such experiments. Perhaps I might mention further that the *Rural New-Yorker*, before giving place to an article on the subject, referred the matter to us. When I told them what I knew about it they refrained from putting the article in print. If a hundred other periodicals would go to headquarters, or, in other words, to a specialist in that particular line before using such sensational articles, it would be better all around.

CATCHING SWARMS OF RUNAWAY BEES, ETC.

On page 732, July 1, I mentioned that Mr. T. W. Bryan, of Ficklin, Ill., would not send us his book containing his "dollar secret," but returned our money. A subscriber sends us a copy of the *Missouri Valley Farmer* to show that they are still letting Mr. Bryan use their reading columns to boom his secret. Below is a sample of the way he answers correspondents:

A lady in Texas says she is a great lover of the honey-bee, but they sting her badly, as at swarming time, so she asks for a remedy. By allowing bees to swarm in the old-fashioned way one is apt to get stung more or less. The only remedy I know of that will cut out all this stinging, all this watching and worrying about your bees at swarming time, is to adopt my plan, and that is to fit up your hive so that, when your bees swarm, they will be conducted at once to this hive by the "home-seekers," and that does forever settle the business for that swarm.

This "dollar book" is now in my hands. It contains five very small pages, coarse print. He commences by quoting from the Bible, evidently to impress people with the fact that he is a godly man. The wonderful secret is told in two or three words. There are two ways of attracting runaway bees back to their hive. One is by the use of a piece of bright-red flannel. This may be *new*, but I think our readers will agree with me that it is not *true*. The second way is to attract the bees by scent, using the oil of anise. This *may* be true, but it is not *new*. It has been advertised for fifty years in secrets for hunting wild bees.

The little pamphlet closes by saying that, as the instructions are copyrighted, you are not permitted to communicate any part of them to your neighbors lest you violate the law as well as lessen your chance of catching bees.

NITRO-CULTURES AND THE DEPARTMENT AT WASHINGTON.

I have felt greatly pained to see in the papers intimations that graft and rascality have gotten hold of the Department of Agriculture at Washington. We have not re-

ceived the particulars as yet; but our good friend Greiner, in the *Farm and Fireside*, refers to a part of the troubles as follows:

While individual farmers here and there may allow themselves to be duped by sleek rascals, the modern farmer does a good deal of his own thinking, and as a class they are too intelligent and have too good leadership of their own to be long deceived by even the most skillfully concocted schemes, may the schemers even have a high official position. Of this we have just had another proof by the sudden collapse of the bubble of the famous nitro-cultures. Now that the gas is out of the bag, we are in a fair way to get at the solid facts in this whole business. I still believe that my earlier estimate of it was about right when I told some of the Buffalo seedsmen last winter, in answer to their question what I thought of nitro-cultures, that there is just about ten per cent of truth and ninety per cent of humbug in it. But we want that ten per cent of truth. Undoubtedly it is valuable. We should not throw the whole thing overboard because somebody has damned it, not with faint but extravagant praise. I have a whole lot of experiments under way at the present time, and expect interesting results. For the present we hardly know "where we are at," as the bulletins of the Department in Washington on this subject will not readily be accepted now as authority. The nitro-culture business has left the fad stage—we shall soon know what is fact and what fancy.

Our readers may remember that I have already cautioned them about paying \$2.00 for enough of the culture to fertilize an acre, and especially where they claim that a different variety was required for each variety of legumes. Of course, no one can find fault with the samples the government sent out for trial free of charge.

GOVERNMENT PLANT-GARDEN IN CALIFORNIA TO TEST HONEY-PLANTS.

We clip the following from the *San Francisco Call*:

The California Promotion Committee announces that the United States Department of Agriculture is establishing a sub-station in the plant-introduction garden at Chico for investigations in agriculture. A specialty will be made of testing honey-plants to be secured by Mr. Benton, of the Department, who is now in India. Bee diseases on the Pacific Coast will be investigated, and an experiment made in the different varieties of bees, among them the giant bee of India and the various specimens of the Philippines.

California is the greatest honey-producing State in the Union, and the department will support an apiary and issue much information to the California apiarist. The apiary sub-station at Chico is in charge of John M. Rankin.

ARTICLES DEFENDING SALOONS AND THE USE OF BEER, ETC.

The brewers have evidently "got busy" in furnishing every periodical, that is low enough to accept it for pay or otherwise, various articles claiming that beer does not cause intemperance, etc. They are also trying to make out that President Roosevelt is a tippler, just as they tried to make out a while ago that he was a user of tobacco. Write to the editors of these periodicals that, if they give place to this kind of stuff, you will not have the paper on your premises. That is just what I have told the editors of one of the Cleveland dailies that I have heretofore taken almost all my life. It begins to look as though we had all got to stand up and let the world know "where we are at," wet or dry.

Hunter-Trader-Trapper

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